

## SharePoint Study Team Report

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### Executive Summary

In 2005, a pilot project of SharePoint was initiated by the EA Program Manager who had used SharePoint in the past and believed the EA process could benefit from the tool. This project utilized existing, aging hardware and was considered to be a test environment. As more users were exposed to how SharePoint worked in a collaborative environment, the project quickly expanded, and for all practical purposes, became production. However, SharePoint was and still is a test environment. The software continues to run on the original test hardware and is difficult to support.

In the fall of 2005, the ARB issued a charter creating a study team to review and recommend the future direction of SharePoint. The team met several times during December, January, February and March. As a result of these meetings, the team concluded that North Dakota (ND) should proceed with a deployment of SharePoint. This deployment should be restricted to those individuals that are authenticated via ND's Active Directory and as a result, should be used for the collaboration efforts of the various agencies and branches that choose to use this tool. Once a document or outcome has been completed those results would need to be stored in a more public repository. SharePoint is currently best considered to be a short-term tool for teams seeking an automated tool to assist in their collaboration efforts.

Please review the Detailed Team Report to understand the scope, process and deployment recommendations concerning SharePoint in ND.

## **Detailed Report**

In 2005, a pilot project of SharePoint was initiated by the EA Program Manager who had used SharePoint in the past and believed the EA process could benefit from using this tool rather than developing an application to manage EA activities. This project utilized existing, aging hardware and was considered to be a test environment. As more users were exposed to how SharePoint worked in a collaborative environment, the project quickly expanded, and for all practical purposes, became production. However, SharePoint was and still is a test environment. The software continues to run on the original test hardware and is difficult to support.

In the fall of 2005, the ARB issued a charter creating a study team to review and recommend the future direction of SharePoint.

**The Project Charter from the ARB included the follow three sections:**

### **Project Background:**

Several agencies have identified a need for a collaboration tool to assist in the management of teams. One specific need is for aiding Enterprise Architecture teams in collaborating on the development of standards and other deliverables. A mechanism is needed to facilitate the development and communication of agendas, minutes and documents among groups. The Health Department has implemented SharePoint as part of a federal initiative. Job Service has been evaluating collaboration tools for specific agency needs. SharePoint has been implemented within Enterprise Architecture on a pilot basis to allow users to become familiar with the product.

### **Project Scope**

The team should conduct research and develop a recommendation to address the following question:

Should we pursue SharePoint as a standard tool for collaboration?

- Document the collaboration functionality provided by SharePoint (at a high level) that would be used to meet agency requirements.
- Document where overlap exists with other tools being used in state government.
- Validate SharePoint as a viable collaboration tool through research or a Gartner call.
- Research issues uncovered to date to determine the viability of SharePoint in a production environment.
  - Security administration
  - Application development implications
  - Support requirements
- Identify and document requirements for deployment, i.e. disaster recovery, administration, training, support, etc.
- Identify and document requirements for ongoing administration and management of meeting workspaces, sites and documents stored within meeting workspaces and sites.
- Identify and document requirements for internal government and external user access to meeting workspaces and sites.

- Identify and document the estimated implementation costs and ongoing costs for deploying SharePoint.
- Document the Pros and Cons for deploying SharePoint as opposed to other alternatives, i.e. do nothing, other solution, etc.
- Recommend an approach to SharePoint going forward.

### **Project Objectives**

1. Develop a recommendation regarding the deployment of SharePoint as a standard enterprise collaboration tool.

### **Project Team Activities and Findings**

#### **Requirements**

After reviewing the charter, the project team met and established the following requirements for a collaboration tool:

#### **Must Haves:**

- Need the ability to easily access collaboration content without installing/distributing client software
- Need the ability to access collaboration content via a web browser interface
- Need a tool or tools that are easy to use as opposed to collaborating via Intranet sites, file server directories and emailing of documents
- Need the ability to search within content, including documents
- Need to be able to limit the search to authorized content
- Need the ability to search within specific document types such as: PDF, MS Office and RTF
- Need the ability to create and manage Meeting Minutes, Agendas, Tasks (i.e. To Do List), Issues and Discussion forums/boards
- Need the ability to easily extract meeting minutes, agendas, task lists, issue lists and discussion boards to a format for archiving
- Need the ability to store and manage documents
- Need the ability to store/move documents to the enterprise repository from within the tool (FileNet)
- Need the ability to access documents from the enterprise repository within the collaboration tool
- Need the ability to version control shared documents (i.e. co-authored documents)
- Need the ability for an application to find and access collaboration tool content and display it on the client workstation (Must Have for AG)
- Need the ability to restrict access to administrative functions to specific user or user groups
- Need the ability to restrict access to user interface customization features within the tool
- Need the ability to secure content to specific user groups or specific users
- Need the ability to restrict user access to create, update, delete, read-only

- Need the ability for an agency administrator to manage the users within their site, including the level of access (i.e. read/write, read-only, etc.)
- Must support existing user accounts already defined within the enterprise (MS Active Directory)
- Need the ability to collaborate/share information with state and local government, political subdivisions, higher education, K-12, boards, commissions and associations
- Need the ability to collaborate with the public and vendors
- Need the ability to backup content for all stored content or specific site/content
- Need the ability to recover a specific document or a site's content
- Need the ability to easily extract content
- Content must be available 24x7
- Need the ability retain/migrate all stored content with tool upgrades
- Need the ability to customize user interfaces
- Need the ability to migrate/transfer site content/definitions from a test environment to a production environment
- Need the ability to migrate/transfer site content to another site
- Need the ability to perform approval of documents, processes, etc.
- Need the ability to route documents/content from one person to another, including a notification to the user
- Need the ability for team members to vote on content, including specific documents, etc.
- Need a low cost solution to maximize the use of the tool
- Training
  - Types of training:
    - System Administration
    - Development
    - Site/Portal Administration
    - End User
  - Need to provide hands on for site/portal administration
  - Need to create and distribute an administrative guide. This document must address records management and records retention policies.

### **Optional:**

- Rich client with expanded capabilities and functionality
- Need the ability to manage retention of stored documents

### **Nice to Haves:**

- Need the ability to search within OpenDocument Format documents
- Content must be available 24x7
- Need the ability to gather information via form

- Need the ability to create your own templates for content
- Need the ability to include third party components within a site
- Need the ability to define custom routing rules

## **Findings**

Once the requirements were gathered, the team contacted Gartner to initiate the review process. The result of that call was an understanding that Microsoft's SharePoint and IBM were the two current leaders in the collaborative space, and because ND has embarked on the Microsoft path, SharePoint would be a logical fit. At this point the requirements were distributed to members for investigation. Gary Houim had received technological training on SharePoint and was key in the review of the inner workings of the product. Jeff Swank was trained in usage of SharePoint and provided insight on when and how to use this tool.

Although the team is recommending a limited deployment and usage of SharePoint, we believe it is premature to propose SharePoint as the standard collaboration tool; this may change as Microsoft continues to improve the product.

One item of concern is that unlike many of our tools, SharePoint's administration is designed to be performed by the users of the tool. Once the servers are running and the backend functions have been configured, SharePoint provides methods to allow each team or group to manage their workspace. While this feature allows teams to be very responsive to their needs, it does require a different thought process and is a basis for a structured approach to deployment. In this structure, ITD would create and manage the ND State Collaborative Portal. Each organization requesting to use this tool would have an area created by ITD and would need to provide a qualified SharePoint administrator to manage their site. SharePoint administration training is currently available from several vendors, ITD is considering a one day session in basic SharePoint administration as an additional option to become qualified.

Another area of concern is SharePoint's ability to serve as a long-term repository. While it appears to be Microsoft's direction, SharePoint as it exists today has several issues that prevent this team from endorsing the use of SharePoint as a repository of record. SharePoint is a collaboration tool and provides many valuable features that teams can use in their business; although, a long-term repository is not one of these features. In addition, the cost of providing access to SharePoint sites outside of State government is prohibitive, so it is recommended that SharePoint be available only from within the State's firewall, thus VPN access would be required for external users, who would also need an AD account and the associated AD CAL.

SharePoint's history of upgrades has not been smooth. Each new version of the product has been a wholesale redesign without an automated migration path, and each site would be manually duplicated after a version update. While the details of the next release are still under a Non-Disclosure Agreement and unavailable to us at this time, we don't believe the current process of upgrades will be changing in the near future. This leads to the recommendation that SharePoint sites be used as they are installed out of the box,

with little, if any, customization. The customization would be lost at upgrade time. Due to the need to duplicate customizations, it will be critical for all customizations to be fully documented. This also contributes to the undesirability of SharePoint as a repository of record. For example, we would suggest SharePoint be used to manage agendas, but meeting minutes should be stored in a permanent repository, depending on the records retention policy each agency has set for each document type. SharePoint is also not recommended as a base for developing applications. Due to the upgrade difficulties we recommend that agency administrators be required to read this recommendation and sign a document stating they understand the risks associated with using the product. In addition any project using SharePoint as its repository needs to include the use of SharePoint as an identified risk to the project.

With the hundreds, if not thousands, of SharePoint templates available on various websites we recommend that an acceptance process be established for any templates an agency may wish to use.

SharePoint also has issues complying with ND standard EGT003-04 on Web Development, and EGT004-04 Accessible Web Development (ADA). While EGT003-04 provides an exception for COTS systems, which SharePoint could be included, EGT004-04 does not contain similar verbiage, and the waiver process would be the responsibility for each agency.

While some features of SharePoint will work in browsers other than Microsoft's Internet Explorer, IE is the only browser Microsoft supports for SharePoint access, and should be used to access SharePoint sites within ND.

SharePoint support would be provided by two groups. First, the ITD group would manage and support the SharePoint infrastructure, performing backups, restores and server updates, in short keeping the SharePoint environment running. The second group involved in support would be the individuals identified as administrators for each Portal area. This group would be responsible for managing their area and required to create sub-areas, pages, meeting spaces, etc. and to manage the security in each of these areas. End users would use their administrators for problem resolution.

ITD is currently working on proposed billing rates for SharePoint; however, a couple of items are known. First, SharePoint requires a Client Access License (CAL), so we will have fixed costs as well as variable costs. The list price on the CAL is \$71 per user, and the fixed costs are estimated to be around \$15,000. Using this as a base and assuming 100 users, each user would be assessed a \$150 up front fee and a monthly charge of \$10 to cover the cost of the CAL and support. It is VERY important to remember that these numbers do NOT reflect the actual discounted costs the State expects to receive, nor do they represent actual billing rates that ITD would use. They are simply included to provide the decision makers information on the possible cost involved in SharePoint. Additional SharePoint infrastructure investments may be needed as the usage increases. We are investigating a possible load test on the production hardware prior to production release to help in the forecasting of when that investment may be needed. At this time it

is assumed that EA participating agencies will pay for their employee's SharePoint access.

## Results of Requirement Review

In scope

Requirement	Priority	Available in SharePoint
The ability to easily access collaboration content without installing/distributing software.	Must Have	Yes
The ability to access collaboration content via a web browser interface	Must Have	Yes
Tool should be easy to use, as opposed to collaborating via intranet sites, file server directories, and emailing of documents.	Must Have	Yes
The ability to search within content, including documents	Must Have	(SPS allows for searching across sites) Yes (WSS allows for searching within a site)
The ability to limit the searching to authorized content	Must Have	Yes
The ability to search within specific document types such as: PDF, MS Office and RTF	Must Have	(SPS allows for searching across sites) Yes (WSS allows for searching within a site)
The ability to create and manage Meeting Minutes, Agendas, Tasks, Issues and Discussion forums/boards.	Must Have	Yes
The ability to easily extract meeting minutes, agendas, task lists, issue lists and discussion boards to a format for archiving.	Must Have	All, except discussion boards, can be exported to Excel spreadsheets manually. Agenda exports are also messy.
The ability to store and manage documents	Must Have	Yes
The ability to store/move documents to the enterprise repository from with the tool (FileNet)	Must Have	Possibly via Vorsite's Enterprise Integration Toolkit (EIT)....This tool is schedule for GA in March of 06.
The ability to access documents from the enterprise repository within the collaboration tool.	Must Have	Possibly via Vorsite's Enterprise Integration Toolkit (EIT)....This tool is currently under development.
The ability to version control shared documents	Must Have	Yes

The ability for an application to find and access collaboration tool content and display it on the client workstation	Must Have	SharePoint has several .Net and web services APIs to access content in SharePoint.
The ability to restrict access to administrative functions to specific users or user groups	Must Have	Yes
The ability to restrict access to user interface customization features within the tool	Must Have	Yes
The ability to secure content to specific users or user groups	Must Have	Yes
The ability to restrict user access to create, update, delete or read-only	Must Have	Yes
The ability for an agency administrator to manage users within their site, including the level of access (i.e. read/write, read-only, etc.)	Must Have	Yes
The ability to integrate with collaboration products already in standards.	Must Have	SharePoint works well with Outlook, IM and MS Office; the next version of Office due out in 07 is expected to further enhance these integrations.
The ability to support existing user accounts already defined within the enterprise (AD)	Must Have	Yes
The ability to collaborate/share information with state and local government, political subdivisions, higher education, K-12, boards, commissions and associations	Must Have	Yes, if AD accounts are set up for these people and they are either inside of the firewall or using a VPN connection
The ability to collaborate with the public, vendors, etc.	Must Have	Yes, if AD accounts are set up for these people or if the Internet connector is used; however, the price of the connector is \$30,000 per CPU. With the dual IIS servers, it would cost us \$60,000 to allow external access; this is in part, the basis for the internal use recommendation.
The ability to backup all stored content or specific site/content	Must Have	Yes



The ability to recover a specific document or a specific site's content	Must Have	<p>Currently, single document restore in the FileNet repository is not available. To get around this issue, deletion of documents is restricted to specific users. If document changes need to be undone, a roll back to the previous version of the document is possible.</p> <p>Garry has tested recovery of SharePoint backed up documents and was able to successfully recover them to the point of the previous backup. He has also been able to restore a site's content to the point of previous backup.</p>
The ability to easily extract content	Must Have	All, except discussion boards, can be exported to Excel spreadsheets manually. Agenda exports are also messy.
Content must be available 12x7	Must Have	Not a product issue
The ability to retain/migrate all stored content with tool upgrades	Must Have	<p>Garry's SharePoint instructor indicated that this is under strict Non Disclosure Agreement (NDA).</p> <p>Garry believes that MS is working on this due to the large number of user complaints.</p>
The ability to customize user interfaces	Must Have	Yes
The ability to migrate/transfer site content/definitions from a test environment to a production environment	Must Have	<p>Garry's instructor indicated "Not easily. Most likely some custom code needed."</p> <p>When asked if the next release would have this capability, the instructor responded: That's under strict NDA for now.</p> <p>Sites designed in test could be exported as a template and then imported into Production. This would allow for the migration of site design, but not content. This migration would be a one-time migration. Future changes would need to be made in both Test and Production.</p>
The ability to migrate/transfer site content to another site	Must Have	Yes

The ability to perform approval of documents processes, etc. before they are posted on a site	Must Have	Yes, approval of site content by site administrator.
The ability to route documents/content from one person to another, including a notification to the user and the ability for approval of these documents, etc. (i.e. workflow)	Must Have	No
The ability for team members to vote on content, including specific documents, etc.	Must Have	Yes
A low cost solution to maximize the use of the tool	Must Have	Not a product issues
Training - System Administration, Development, Site/Portal Administration, End User	Must Have	Yes
Rich client with expanded capabilities and functionality	Optional	No
The ability to manage retention of stored documents	Optional	No
The ability to search within OpenDocument formatted documents (zip files)	Optional	Garry looked into this and found that this ability is not available out of the box...however there are 3rd party tools available for this.
Content availability 24x7	Optional	Not a product issue
The ability to gather information via form	Optional	<p>InfoPath is required to create the form. Are end users required to have InfoPath to complete the form? After testing, it appears that InfoPath would be required to be installed on the PC for each user wishing to complete a form. This may or may not be a major issue as InfoPath is a part of MS Office Enterprise, but it is not an approved tool.</p> <p>The requirement for InfoPath could restrict the use of this functionality for forms that would need to be accessed by the public.</p>
The ability to create your own templates for content	Optional	Yes
The ability to include third party components within a site	Optional	Yes
The ability to define custom routing rules	Optional	No
The ability for the tool to interface to MS Project documents	Optional	MS Project Server is required. Not tested
The ability to enter and capture	Optional	MS Project Server is required. Not tested

time tracking for team members		
The ability to search within MS Project files	Optional	MS Project Server is required. Not tested
The ability to do Polls/Surveys	Optional	Yes, basic surveys are possible
Video capabilities	Optional	No
Desktop sharing	Optional	No
Searching across multiple repositories	Optional	SharePoint searches can include SharePoint sites, Web sites and non-SharePoint file servers.